EXAMPLES

OF

LABOURERS COTTAGES

EXAMPLES

OF

Labourers' Cottages,

WITH PLANS FOR IMPROVING THE
DWELLINGS OF THE POOR
IN LARGE TOWNS.

BY

JOHN BIRCH,

Architect,

AUTHOR OF DESIGNS FOR DWELLINGS OF THE LABOURING CLASSES, TO WHICH WAS AWARDED THE MEDAL AND PREMIUM OF THE SOCIETY OF ARTS.

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TO THE

NOBILITY AND GENTRY,

THIS PAMPHLET

IS MOST RESPECTFULLY INSCRIBED

BY THEIR MOST OBEDIENT

HUMBLE SERVANT,

JOHN BIRCH.

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PREFACE.

THE first Edition of this Pamphlet, having been so well received, and the number of applications which have since been made, fully testify to the want of Improved Designs, for the Dwellings of the Poor in Rural Districts, arranged with the view of combining taste with economy, has induced the Author to publish a Second Edition. The greater portion of the designs will be found to have been erected in various parts of the country, the actual cost in each case being given.

It is due to the nobility and landed proprietors to mention that, for sometime back, much has been done towards improving the physical and moral condition of the agricultural labourer; there still, however, remains much to be done in building new dwellings containing a proper number of bedrooms, and increasing the sleeping accommodation by at least one or two bedrooms of all existing cottages having at present only one bedroom; there are a number of these cottages with only one bedroom to be met with, many inhabited by a whole family. The importance of building healthy and comfortable dwellings for the labouring poor is well worthy of the serious consideration of every landowner, and providing a proper number of bedrooms to each dwelling is of the greatest importance, the good effects upon the young, through being brought up in homes where they can be properly trained and regulated, and where the ordinary

requirements of health and morality can be observed, cannot be too highly appreciated, and would tend very much to diminish many evils in the rising generation.

It is generally admitted and I can confirm from experience that the salutary influences which a healthy and comfortable labourer's dwelling, possessing a proper number of bedrooms, exercises upon the physical, social, and moral condition of the inmates is very great. With the facilities offered by Lands Improvement Companies for the erection of improved cottages upon plans embracing the requirements of the Inclosure Commissioners by advancing money repayable by a rent charge spread over twenty-five years, it is to be regretted that more frequent recourse is not had to this scheme for improving landed property by erecting the requisite number of farm buildings, farm houses and cottages. From the correspondence on land loans, which recently appeared in a leading journal, it may be urged that this method of carrying out improvements is very costly and attended with much trouble. With regard to land drainage carried out in this way, I cannot say, having had little experience; I have, however, had considerable experience in erecting agricultural buildings and labourers cottages under the Inclosure Commissioners, and, with the exception of some modification in the charges of Lands' Improvement Companies, I consider the terms on which estates may be improved in this way as reasonable as might be expected. I have not found the Inclosure Commissioners requirements more stringent than is necessary to insure the due stability of the buildings. In the course of my experience I have erected a considerable number of cottages under their inspection at sums varying from £275 to £340 per pair. Such buildings ought to be erected substantially to secure their lasting a much longer time than the period over which the rent charge is spread.

It is not necessary that all the cottages on an estate should each provide three bedrooms of proper dimensions, but is highly desirable that the largest number of dwellings should embrace this accommodation, with a few cottages having one and two bedrooms each. It is also very necessary, in case of sickness, infirmity, &c., to arrange some of the three bedroom cottages with one of the sleeping rooms on the ground floor. I have found it both convenient and economical to build blocks of three cottages, two with three bedrooms each and one with two bedrooms. Pairs of cottages can be easily erected, one dwelling having three bedrooms and the other dwelling two; this plan would be found more economical than building single cottages, at any rate when single cottages are built it would be well and economical to use a plan capable of being added to and made a double cottage at some future time.

In erecting cottages throughout the country, besides arranging and building them badly, it is the usual custom to make them as plain and unsightly as possible, as if the different forms of arrangement were not capable of being made more or less picturesque in their external treatment; there is no reason why this should be so: a little taste, prudently exercised, adds but little, if any, to the cost of a compact plan, and while it is necessary that the dwellings should be healthy and comfortable to live in, the external appearance ought also to be of an appropriate and pleasing character. The smallest hamlet on an estate ought to be in keeping with the mansion, and denote, by a picturesque rusticity, the purposes to which it is devoted.

There are few good examples of the quaint Old English cottage to be found; the few that remain shew taste and rural simplicity. It would be well, where not too dilapidated, to

renovate and preserve these Old English features instead of having them destroyed and effaced by *Builders* and *Carpenter-Architects* who, from want of ability and taste, replace them with buildings of an exceedingly common and vulgar description.

With these few imperfect remarks the attention of the reader is respectfully invited to this subject, trusting it may stimulate to renewed endeavours for promoting the welfare of the agricultural labouring classes.

JOHN BIRCH,
Architect.

No. 9, John Street, Adelphi, W.C.
December, 1871.

PLATE No. I.

EXAMPLES OF LABOURERS' COTTAGES.

PLATE I.—*Design for a Pair of Agricultural Labourers' Dwellings, to which was awarded* THE SOCIETY OF ARTS *Medal and Premium.*

THIS design for a pair of improved dwellings for the accommodation of the labouring classes was approved of by the Council of the Society of Arts, from 134 designs submitted in competition, assisted in their decision by the judgment of three professional gentlemen.

Each dwelling contains a living room, three bedrooms, entrance porch, scullery, pantry, fuel store, piggery, privy, cesspit and ashpit; each scullery is fitted with a washing copper, sink, and a fireclay baking oven; the living room fireplaces have ranges, and are fitted on each side with dwarf cupboards, with bookshelves over them; the bedroom fireplaces have firelump cottage grates. The system of warming and ventilating hereafter described has been successfully applied to several of these dwellings.

Each pair of cottages have a well for hard water supply, and the rain water from the roofs is conveyed to tanks for domestic use, having pumps fixed over the sinks in sculleries.

The dwellings have been for the most part built of brick, and the roofs are covered with tiles, the external walls being constructed *hollow* (in two thicknesses of brickwork, with space

between) to prevent damp, and are plastered and coloured; the sculleries are fitted with towel rollers and plate racks, and the pantries have stone shelves and galvanized iron meat hooks.

The cost of erecting these dwellings in different parts of the country, including water supply, drainage, and fittings, completed, ready for occupation, has varied from £226 to £375 per pair according to the locality, distance of carriage, and rates of wages.

These dwellings have been erected as undermentioned:—

In Wiltshire	For	The Most Noble the Marquis of Ailesbury, K.G.
„ Northamptonshire	„	The Right Honourable the Earl Spencer, K.G.
„ Sussex	„	The Right Honourable the Earl Delawarr.
„ Derbyshire.....	„	The Right Honourable the Lord Vernon.
„ Essex	„	Sir H. Selwin Ibbetson, Bart., M.P.
„ Shropshire	„	Sir William Curtis, Bart.
„ Sussex	„	Sir Curtis Lampson, Bart.
„ Huntingdonshire..	„	The Rev. C Alington.
„ Shropshire.....	„	The Rev. F. Wolryche Whitmore.
„ Sussex	„	The Rev. A. H. Sauxay Barwell.
„ Wiltshire	„	R. P. Long, Esq.
„ Worcestershire ...	„	Frederick Elkington, Esq.
„ Herefordshire ...	„	J. Hungerford Arkwright, Esq.
„ Sussex	„	Samuel Carter, Esq., M.P.
„ Berkshire	„	Nathaniel Humfrey, Esq.
„ Hampshire.....	„	R. G. Linzee, Esq.
„ Surrey	„	G. Calthrop, Esq.
„ Leicestershire ...	„	Miss D'Oyly.
„ Hertfordshire ...	„	Horace Smith Bosanquet, Esq.
„ Sussex	„	Robert Burnett Brander, Esq.
„ Carmarthenshire..	„	Alan J. Gulston, Esq.

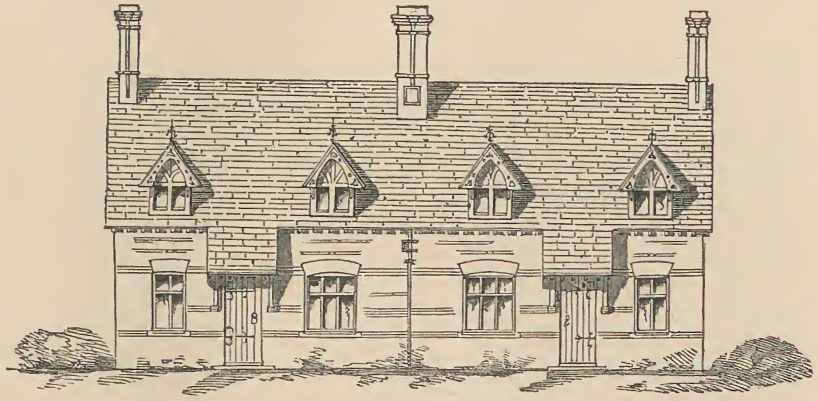


PLATE No. II.

PLATE II.—*Cottages, erected on the Savernake Estates, in Wiltshire, for* THE MOST NOBLE THE MARQUIS OF AILESBURY, K.G.; *on the Dudmaston Estates, Shropshire, for the* REV. F. H. WOLRYCHE WHITMORE; *on the Crouch Land Estate, in Surrey, for* J. LUTTMAN JOHNSON, ESQ.; *and on the Rowfant Estate, in Sussex, for* SIR CURTIS LAMPSON, BART.

THIS drawing shows a geometrical elevation of some improved cottages for farm labourers erected recently at Great Bedwyn, near Marlborough, Wiltshire, for the Most Noble the Marquis of Ailesbury, K.G. Each cottage contains, on the ground floor, entrance porch, living room, and boy's bedroom, with scullery, pantry, and wood-house in rear, and a store closet under stairs; the chamber floor contains a parents' and a girls' bedroom; the living rooms and bedrooms are of good proportions; the out-buildings are situated within a reasonable distance in the rear of the cottages, having piggery and piggery court, privy, cesspit, and ashpit to each cottage.

The bedrooms have deal floors, all other parts have tile and brick floors; the living rooms are fitted with cottage ranges, with ovens; and the bedrooms have small grates: fireclay baking ovens, washing coppers, and sinks are fixed in each scullery: there is a hard water supply to each cottage, and the rain water is saved for domestic use, having a rain-water tank, with pumps to draw therefrom fixed over each sink in scullery; dwarf cupboards, with bookshelves, are fixed on each side of living room fireplace; towel rollers and plate racks are fixed in sculleries, and meat hooks in

pantries; all the living rooms and bedrooms are plastered; the sculleries, outbuildings, &c., limewashed. These cottages have been built of local red bricks, made on the Lord Ailesbury's estates, relieved with bands and arches of dark coloured bricks, from the same kilns; the external walls are made in two thicknesses of brickwork, each $4\frac{1}{2}$ inches, with a 3 inch space between to prevent damp; the roofs are covered with plain tiles of dark red and brindle colour, from Bridgewater, laid to pleasing patterns, with valley tiles, and ornamental crested ridge tiles; the dormer windows have bold projecting roofs, with cut barge boards and wrought boarding, and finished at the apex with cast iron finials, of a gothic character; the main roof is continued down over the entrance porches, forming a hood, supported on ornamental wood brackets, springing from moulded stone corbels. These plans have been approved of by the Inclosure Commissioners, and the dwellings have been built under their inspection. The cost of these cottages was £335 per pair.

A number of pairs of similar cottages have also been erected recently on some of the farms of the Dudmaston Estates, in Shropshire, by the Rev. F. H. Wolryche Whitmore, under the inspection of the Inclosure Commissioners; they are built of Broseley bricks, of a very hard and impervious description, covered with tiles of the same material, and are finished in other respects similar to those on the Marquis of Ailesbury's estates, at a cost of £290 per pair.

Cottages on this plan have also been erected on the Crouch Land Estate, in Surrey, for J. Luttman Johnson, Esq., under the inspection of the Inclosure Commissioners, at a cost of £300 per pair; also on the Rowfant Estate, in Sussex, for Sir Curtis Lampson, Bart., at a cost of £350 per pair.

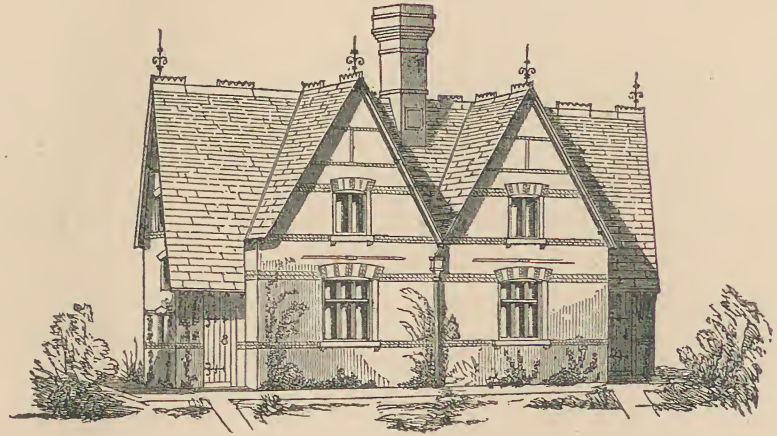


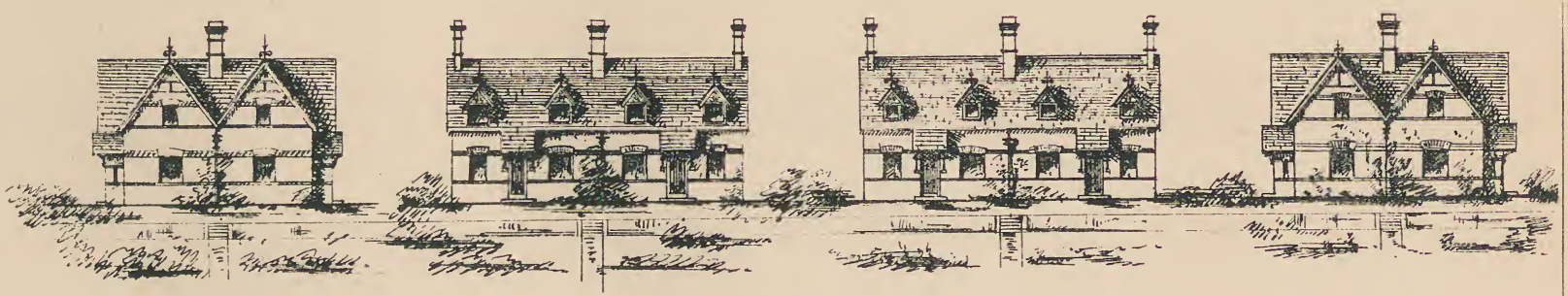
PLATE No. III.

PLATE III.—*This Drawing shows a perspective view of some Cottages erected at Clinch, near Pewsey, Wilts, for* THE MOST NOBLE THE MARQUIS OF AILESBURY, K.G.

EACH cottage contains, on the ground floor, an entrance porch and staircase, with living room and scullery, the two latter entering off the entrance porch, having a pantry and woodhouse adjoining; the chamber floor contains a parents' bedroom, and a boys' and girls' bedroom, of good dimensions; the outbuildings are placed at a healthy and convenient distance in the rear of the cottages, containing the accommodation before mentioned. These cottages are finished in every respect similar to those previously described, having rain-water tank, drainage, well, &c., complete, and having in addition a simple and economical system of warming and ventilation (see description and plate in the latter part of the book), by which method a considerable amount of fuel can be saved, and a large portion of the heat from the fireplaces economized and applied to warming and ventilating these rooms, as well as the bedrooms immediately over them, securing a steady admission of rarefied air, and maintaining a constant change of atmosphere. These cottages have been built of the materials and in the manner before described. The cost of these cottages completed, fit for occupation, including a well, upwards of 70 feet deep, was £330.

PLATE IV.—*This Drawing shows, on a small scale, a Group of Cottages recently erected on a site adjoining the Railway Station, at Great Bedwyn, near Marlborough, Wilts, for* THE MOST NOBLE THE MARQUIS OF AILESBURY, K.G.

THESE cottages are similar to those before described, and have been built of bricks made on the estate, covered with Bridgewater tiles. The centre cottages are placed some distance back from the pair at each end. Each of the cottages have three sleeping rooms, some being placed on the ground floors—a very desirable arrangement in cases of sickness, infirmity, or where the tenants may have a lodger, friend, or aged relatives. The cost of these cottages with outbuildings, rain-water tanks, wells, drainage fixtures and fittings complete has been at the rate of £335 per pair.



Group of Cottages Great Bedwyn, near Marlborough, Wilts

T. Pettitt & Co. Litho. Frith St. W.

PLATE Nº 4.

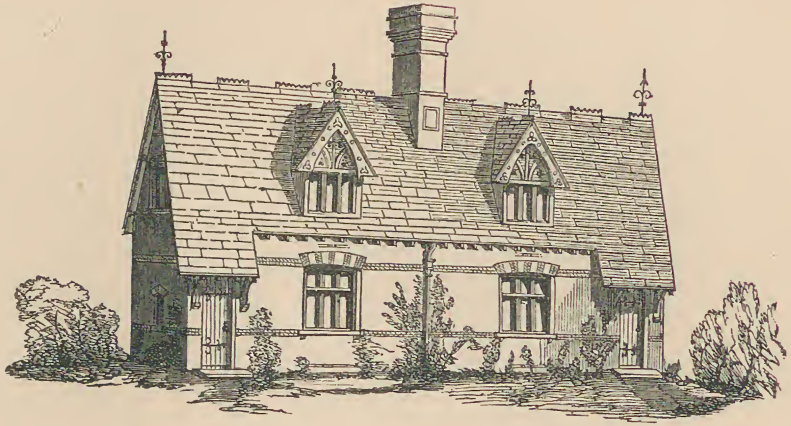


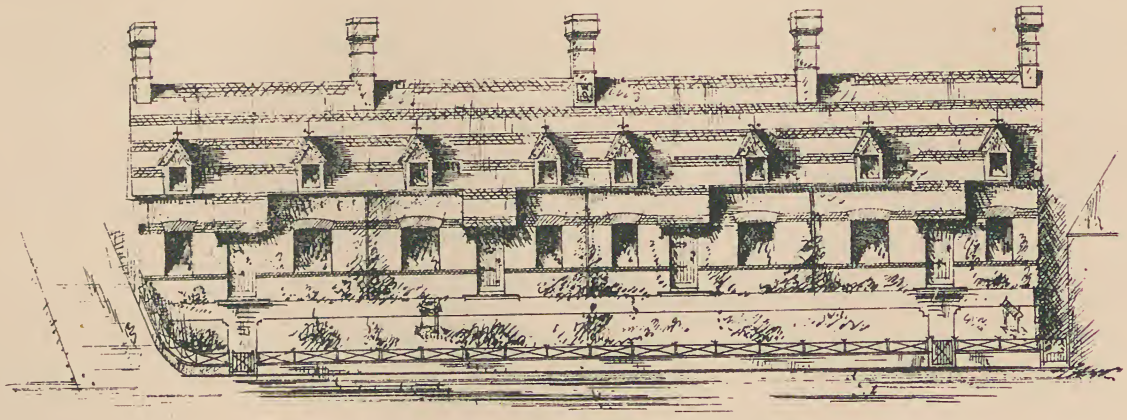
PLATE No, V.

PLATE V.—*This Drawing shews a perspective view of some Cottages designed for and intended to be built in Savernake Forest, by* THE MOST NOBLE THE MARQUIS OF AILESBURY, K.G.

EACH cottage contains on the ground floor an entrance porch, staircase, living room, and scullery, with pantry and fuel house adjoining; the chamber floor contains a parents' bedroom, with boys' and girls' bedroom of good proportions; the outbuildings embrace the conveniences before enumerated, placed at a sufficient distance in rear. The estimated cost of this design complete, was about £330.

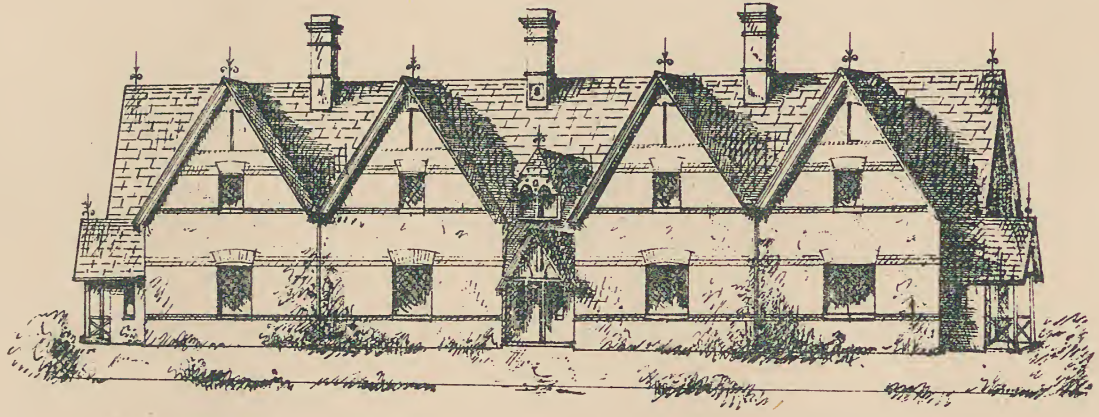
PLATE VI.—*This Sketch shows a Group of Four Cottages, erected in the Village of Great Bedwyn, near Marlborough, Wilts, by* THE MOST NOBLE THE MARQUIS OF AILESBURY, K.G.

EACH cottage contains a living room, scullery, and three bedrooms—one of the bedrooms being placed on the ground floor. The cottages have a complete equipment of outbuildings, and have been erected with bricks made on the property, covered with Bridgewater roofing tiles. These cottages stand on an elevated and healthy situation, and are finished in the foreground with a neat fence on a dwarf wall. The system of ventilation hereafter described has also been applied to these dwellings. The cost of this block of four cottages, including the outbuildings, rain-water tanks, wells, drainage, fixtures and fittings complete, ready for occupation, has been a little over £665.



—Group of Cottages in the Village of Great Bedwyn—
. Wiltshire .

PLATE Nº 6.



Cottages at Althorp, Northamptonshire.

PLATE VII.—*Group of Cottages erected at Althorp, Northamptonshire, for* THE RIGHT HONOURABLE THE EARL SPENCER, K.G., &c., *the Lord-Lieutenant of Ireland.*

THIS plate shows a perspective view of a group of four labourers' cottages, erected at Althorp, for The Right Honourable the Earl Spencer, K.G. Each cottage contains an outside porch, with inner porch and staircase, living room, scullery, and three well-proportioned bedrooms, with a commodious linen closet. The cottages have been erected of local bricks; the external walls being constructed hollow to prevent damp, and the roofs are covered with ornamental tiles, laid to pleasing and effective patterns, finished with crested ridge, with projecting eaves, gables, and open timber porches.

The cost of this group, which was not built by contract, including complete out-buildings, water supply, drainage, rain-water tanks, stoves and ranges, fixtures and fittings complete, the workmanship and materials being measured and valued at completion, was £512 for the four dwellings, or £128 per dwelling.

PLATE VIII.—*Single Cottage erected for* SIR H. SELWIN IBBETSON, BART., M.P.

THIS single cottage has been erected in one of the villages on the Down Hall Estate, near Harlow, Essex, for Sir Henry Selwin Ibbetson, Bart., M.P. It contains a convenient living room, bedroom, entrance porch, stairs, and large store closet on ground floor, with scullery, pantry, and woodhouse in rear; the chamber floor includes two good size bedrooms.

This cottage has been built with white perforated bricks from Cambridge, relieved with bands and arches of dark red bricks, and the roof is covered with Huntingdonshire tiles of a dark brown and brindle colour, in pleasing and simple patterns. The cottage is thoroughly drained, and the rain-water from roof is conveyed to a tank for domestic use; there are suitable outbuildings within a moderate distance in rear of the dwelling. The cost of this cottage, including all fittings, stoves and range, rain-water tank, drainage, outbuildings, &c., complete, was about £170.

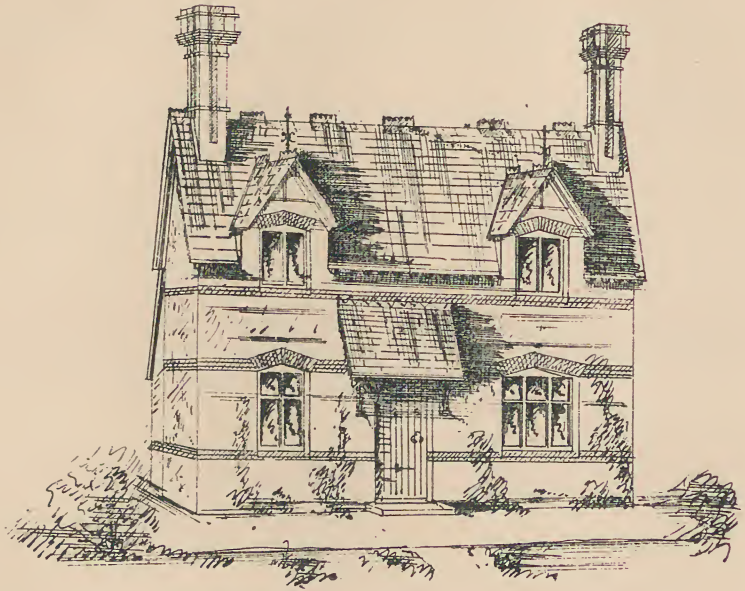


PLATE Nº 8.

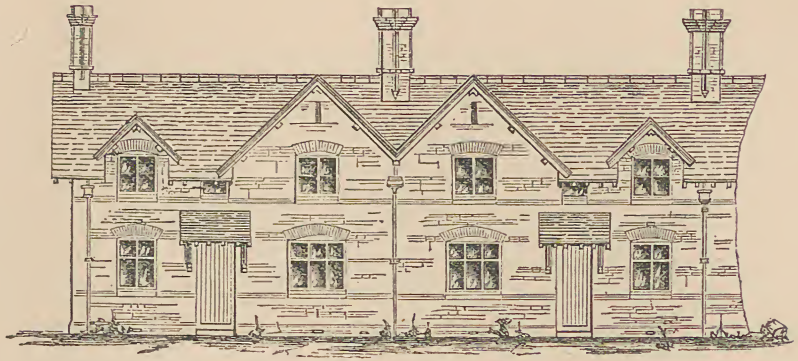


PLATE No IX.

PLATE IX.—*Cottages erected for* THE SALISBURY AND YEOVIL RAILWAY COMPANY.

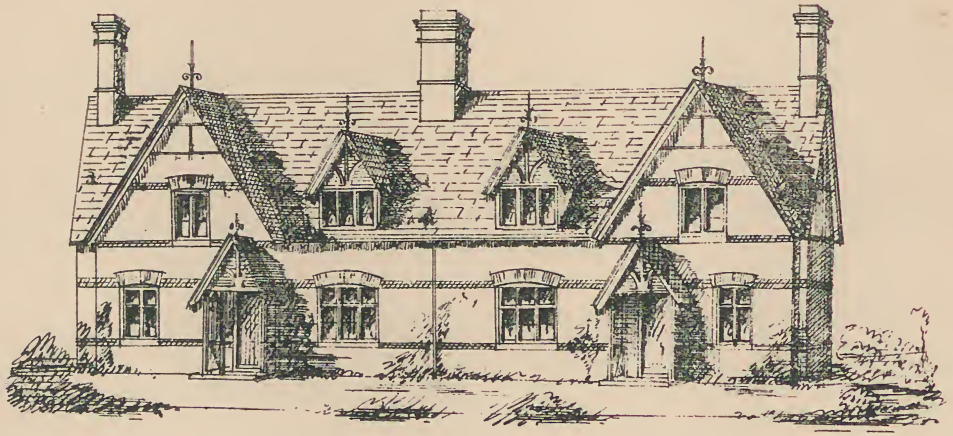
THIS geometrical view shows one half of a group of four cottages erected, from Mr. Birch's plans, by the Salisbury and Yeovil Railway Company for the use of their workmen. Each cottage contains a living room and bedroom on the ground floor, with a scullery, pantry, and woodhouse in rear, and a good store closet under stairs; the chamber floor contains a parents' and girls' bedroom; the outbuildings, which are erected in the rear of the cottages at end of garden, comprise a piggery, privy, cesspit and ashpit to each cottage; the living rooms and bedrooms have deal floors, and all the other parts have tile floors; the living rooms are fitted with cottage ranges, having ovens, and the bedrooms have small firelump cottage grates; the sculleries are provided with washing coppers and sinks; the rain-water is conveyed to tanks for domestic use, having a pump fixed over each sink in scullery; the living rooms are provided with dwarf cupboards on each side of fireplace, and have book shelves fixed over them; the walls of the living rooms and bedrooms are plastered and coloured, and those of the sculleries, outbuildings, &c., are limewhited. These cottages have been erected with local bricks, the external walls being constructed in two thicknesses of 4½ inch brickwork, with a space of 3 inch between to prevent damp, well bonded together with purpose-made cast-iron ties; the roofs are covered with Bridgewater tiles, laid in bands of plain and ornamental patterns, and finished with a crested ridge tile; the projecting portion of roof, at eaves, gables, and dormers, is lined with wrought boarding and finished with barge rafters. The entrance porches have projecting hoods, supported on ornamental wood brackets.

To ensure dryness the walls of these cottages have a proper damp course at floor level, and due attention has been paid to ventilation. One well is provided for the use of the four cottages. The cost of this block of four cottages complete was £610.

PLATE X.— *Cottages designed for* HUGH MAIR, ESQ., *and proposed to be built at Dartmouth, Devonshire.*

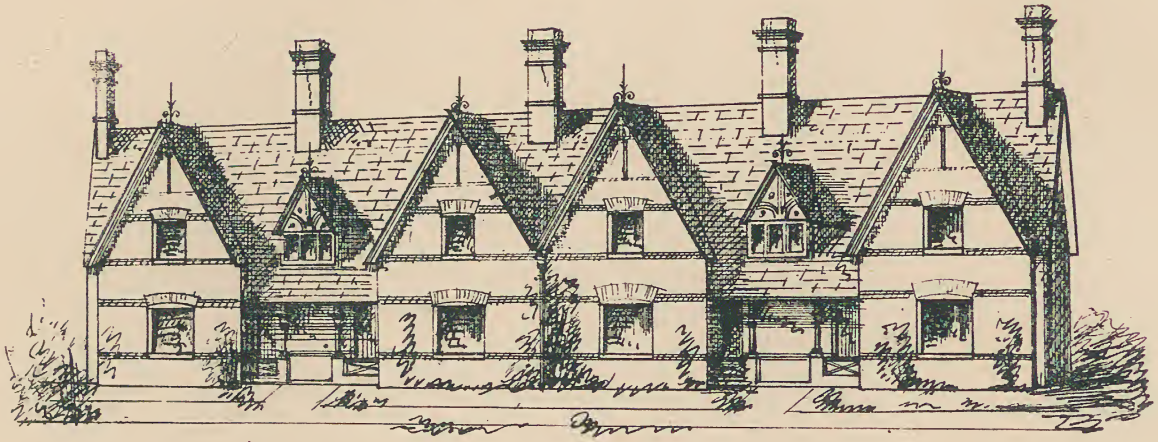
THESE dwellings were intended to have been built (with others of an approved description) on a site overlooking the river Dart, in close proximity to the town, for the accommodation of the poor of Dartmouth. The plans provided each dwelling with a convenient living room, bedroom, and scullery, pantry, fuel house, &c., on the ground floor, with convenient offices in the rear, and well-proportioned bedrooms upstairs. These cottages were intended to have been built of neatly hammer-dressed random coursed rubble walling, with dressings to doors and windows of local stone, and roofed with Bridgewater tiling in bands of plain and ornamental patterns, finished with a crested ridge tile of approved pattern.

The cost of these cottages, if erected of brick, including out-buildings, water supply, drainage, fixtures and fittings, complete, is estimated at the sum of £300 per pair.



Cottages proposed to be built at Dartmouth, Devonshire.

PLATE Nº 9.



Cottages at Hele near Collumpton, Devonshire

T. Pettitt & Co. Litho, Frith St. W.

PLATE XI.—*Group of Cottages at Hele, near Collumpton, Devonshire.*

THIS group of cottages was designed for C. R. Collins, Esq. Each dwelling contains a living room and scullery, with open verandah, entrance lobby and staircase, pantry and fuel house; the living room and scullery each entering off the entrance lobby; the chamber plan provides for a parents', boys', and girls' bedroom of good proportions, having fireplaces in each, and a good sized linen closet.

The cost of this group of four cottages, including outbuildings, water supply, drainage, stoves and ranges, fixtures and fittings, &c., complete, was estimated at the sum of £600.

PLATE XII.—*Design for a Single Cottage.*

THIS view shows a design for a single cottage, containing an entrance porch, staircase, living room, and three bedrooms, with scullery, pantry, woodhouse, and outbuildings.

The cost of this cottage, built of brick and covered with tiles, including well, drainage, fittings, &c., complete, is estimated at £150.

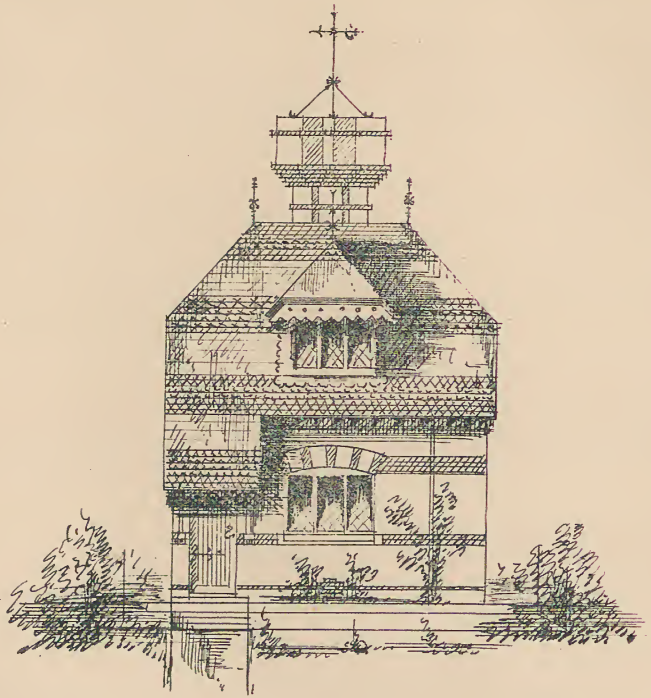
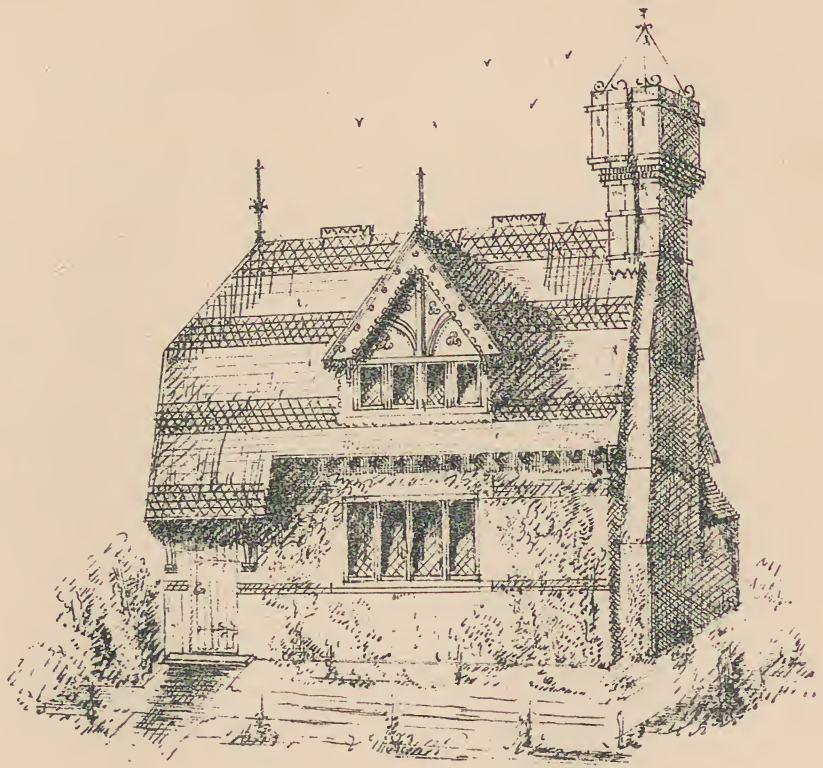


PLATE Nº 12.



Design for Single Cottage

PLATE NO 13.

PLATE XIII.—*Design for a Single Cottage.*

THIS view shows a design for a single cottage containing an accommodation equal to the last-mentioned design. This design, as well as the last described, can be arranged to contain one, two or three bedrooms.

The cost of executing this design would be somewhere about £150.

PLATE XIV.—*Design for a Pair of Labourers' Cottages.*

THIS view shows a design for a pair of labourers' cottages, based on the prize plan. Each cottage would contain three well-proportioned bedrooms, entrance porch, staircase, living room, scullery, well-ventilated pantry, woodhouse, and outbuildings complete.

The cost of these cottages, per pair, built of brick, with hollow walls and covered with tiles, including well, drains, fixtures and fittings complete, is estimated at £300.

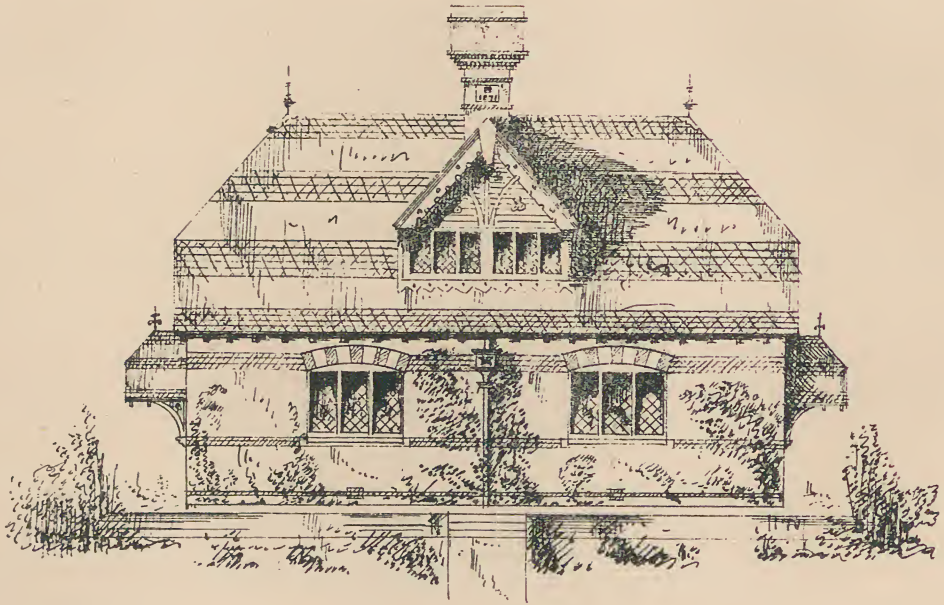
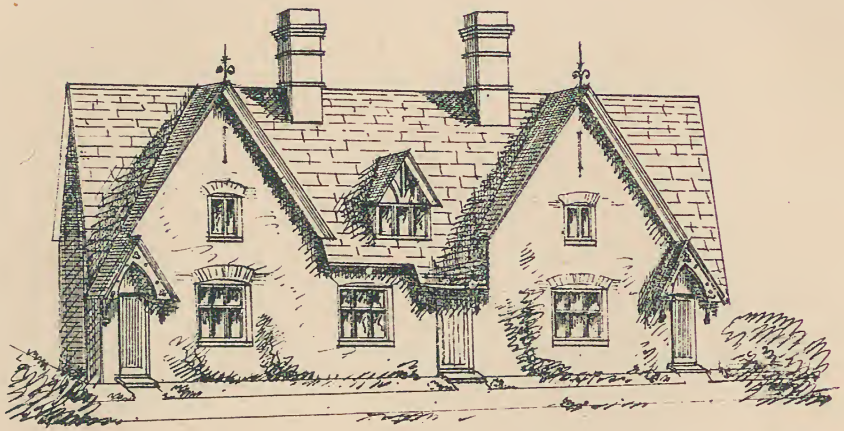


PLATE No 14.



Design for Block of 3 Cottages.

PLATE XV.—*Design for a Group of Three Cottages.*

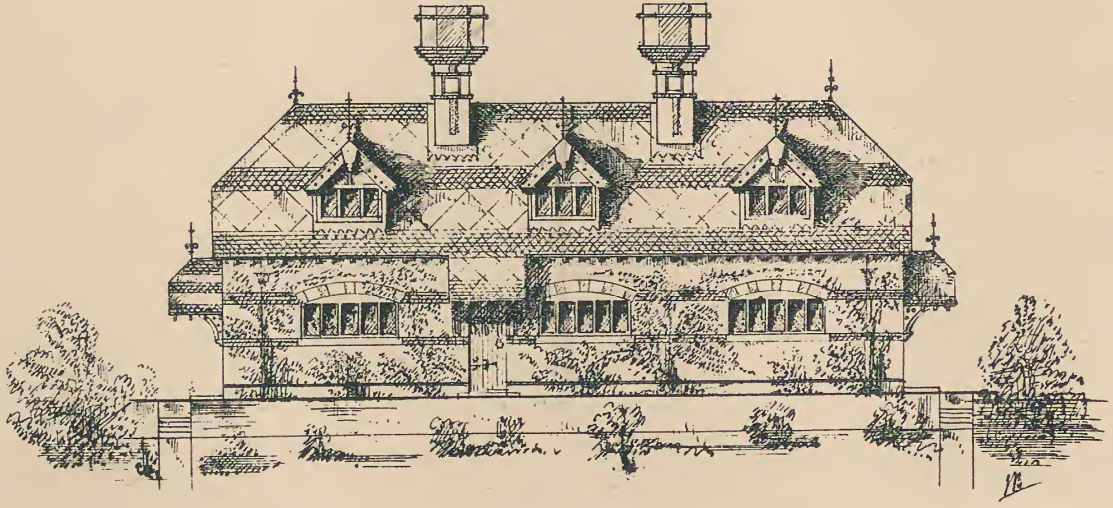
THIS plate shows a perspective view of a design for a group of three cottages, the centre cottage containing two bedrooms, but can be arranged to afford accommodation for one, two, or three bedrooms, and the end cottages each contain three bedrooms, with living room, scullery, entrance porch, stairs, and outbuildings.

The cost of this group, built of brick, with hollow walls and covered with tiles, with drainage, water supply, stoves and ranges, fixtures and fittings complete, ready for occupation, is estimated at £380.

PLATE XVI.—*Design for a Group of Three Cottages.*

THIS plate shows a view of a design for a block of three labourers' dwellings, arranged on the plan to which was awarded the Society of Arts prize. Each dwelling provides for three well-proportioned bedrooms, with living room, scullery, well-ventilated pantry, fuel house, entrance porch, stairs, and outbuildings.

The cost of this group, built of brick and tile, with hollow walls, with water supply, drainage, and fittings complete, fit for occupation, is estimated at £360.



Design for 3 Cottages

PLATE No 16.

Sketch shewing method of Warming and Ventilating the Cottages.

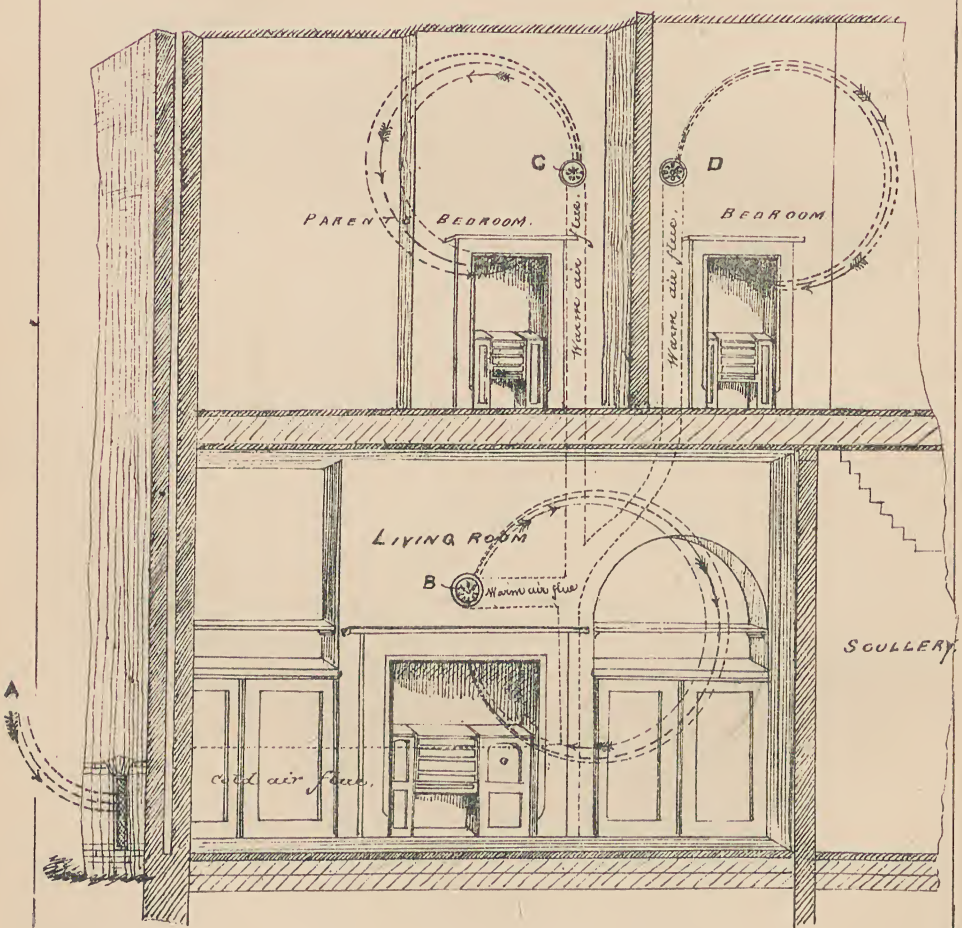


PLATE No 7.

PLATE XVII.—*Explanation of a System of Ventilation applied to the Improved Dwellings recently erected on* THE MOST NOBLE THE MARQUIS OF AILESBURY'S ESTATES, *in Wiltshire, and in Sussex, for the* REV. A. H. SAUXAY BARWELL, M.A., *and elsewhere.*

THE importance of ventilation in our dwellings will be readily admitted by all possessing any knowledge of the nature and description of the abodes of the very poor in large and populous cities. Some of our new hospitals and institutions have been arranged upon scientific principles by those possessing a *practical* as well as a *theoretical* and *artistic* knowledge of their profession; it is, however, a fact that little or no attention whatever is devoted to this important feature in modern domestic buildings.

Much of the poverty and disease prevalent amongst the poor is doubtless produced from the unhealthy state of their homes, the atmosphere being frequently poisoned and rendered most injurious to health by the effluvias from defective drains and old cesspools, producing many contagious diseases arising from the want of good ventilation,—the want of a plentiful supply of pure and wholesome water,—the want of properly constructed and well trapped drainage,—the want of a strict and thoroughly efficient sanitary supervision and house to house inspection,—the overcrowding of the dwellings, many of the localities being so densely built upon, so badly arranged and planned, that currents of fresh

air cannot penetrate many of the courts and alleys of the thickly populated parts of large towns. In many parts of London four, six, eight, and in some cases ten-roomed houses, can be found with families of from two to six occupants (children and adults) living in each room of the house, some of the rooms containing not more than 600 or 700 cubic feet of space in all, with very narrow confined staircases, and scarcely any ventilation whatever.

When making an inspection of the dwellings of the poor of Liverpool, many dilapidated fever-stricken localities were discovered where it was very dangerous to explore; nearly all having dwellings wholly under the level of the street, where some of the occupants slept. A space of about 8 or 10 feet was all the distance between the back of the dwellings and the back of the tenements in the opposite street, and even this limited space was devoted to open privies and dungpits, poisoning the air and producing a high rate of mortality.

With the knowledge we possess of the benefits derived from good ventilation, it is a matter of surprise that little or no attention whatever is bestowed on this subject in the construction of nearly all our domestic buildings of the present day, beyond the ordinary old-fashioned means of loose-fitting doors and windows and open fireplaces.

Upon referring to the diagram it will be seen that the cold fresh air is admitted through a perforated cast-iron grating, fixed in the external wall, close to the party wall at A, and passes along the channel shown by dotted lines, and marked cold air flue, until it reaches the back of the living room fireplaces, where, by means of firelump backs to these fireplaces, the cold fresh air becomes gradually heated, and passes thence up the warm air flues shown by the perpendicular dotted lines, one flue being constructed to communicate with the living room; wrought iron self-acting valves are fixed at a convenient height over the chimney pieces for the admission of the warm air to these living rooms at pleasure, and after circulation passes up the chimney flue. By this method an equal temperature is sustained capable of being increased or diminished, and the atmosphere is rendered pure and wholesome by a *constant* and *steady* admission of rarefied air. The same warm air flues are carried up to the bedrooms over the living rooms, and admitted into each in a similar manner, main-

taining a steady change of atmosphere and passing up the chimney flue. By this system the whole of the heat from the area at the back of the fireplaces, which are constructed back to back, is utilised, effecting a saving in the consumption of fuel, and dispensing with fires in the bedrooms. In addition to this system, and to assist the ventilation generally, moderate sized frames, filled in with perforated zinc, are fixed over each of the bedroom doors, communicating with the staircase, and in the ceilings of the latter are fixed accesses to roof, perforated for the escape of the surplus foul air, from whence it passes through perforated slits in the external walls of the main gables.

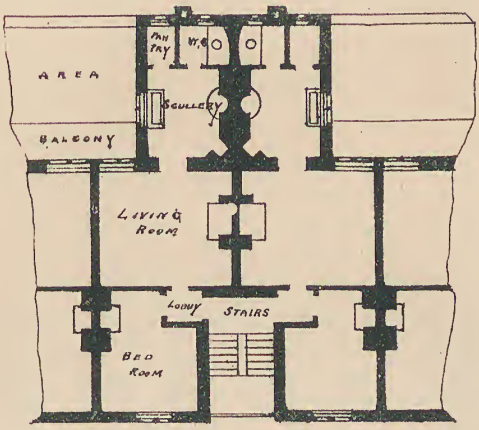
PLATES XVIII & XIX.—*Dwellings designed for the accommodation of the Poor of Liverpool.*

THE question of providing healthy and convenient dwellings for the poor in large towns as well as in the country, at rents equal to their means, has not received that attention the importance of the question deserves. Many of the dwellings in large towns, being demolished from time to time to make room for public works and other improvements, render it necessary that the poor should be provided with additional accommodation, and such ought not to be left to unscrupulous enterpise, but should be under the jurisdiction of some responsible authority, to ensure these buildings being constructed to embrace every improvement of the age. Many dilapidated dwellings, in dangerous localities, ought to be swept away instead of being continually patched and repaired, or suffered to continue in their wretched state—hot beds of disease, poverty, and vice, a disgrace to the parishes in which they are situated.

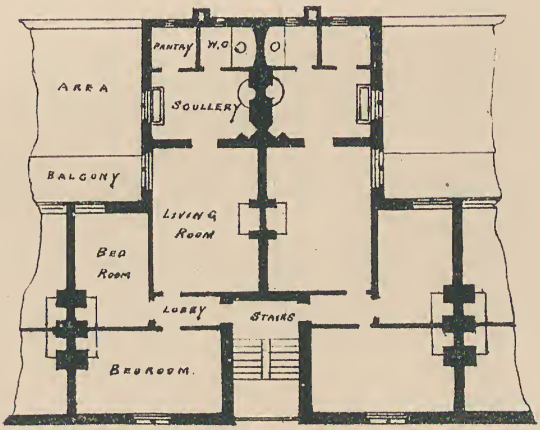
These plans, which were prepared for the accommodation of the poor of Liverpool, although not adopted, proved upon examination by the borough engineer to be the most economical from upwards of 70 designs submitted in competition.

The buildings were intended to be six stories high, without any basement dwellings; they provided for 168 distinct dwellings divided into blocks of three classes. In Class I each dwelling provided for a living room and three bedrooms. In Class II, a living room and two bedrooms. In Class III, a living room and one bedroom, with scullery, &c., to each dwelling. The cost of Class I being at the rate of £179 16*s.*; Class II, £148 7*s.*; Class III, £98 18*s.* per dwelling, or at the rate of £49 9*s.* per room. The rents were rated as follows:—Class I, at 6*s.* 6*d.*; Class II, at 4*s.* 10*d.*; Class III, at 3*s.* 3*d.* per week; the average rent per room being

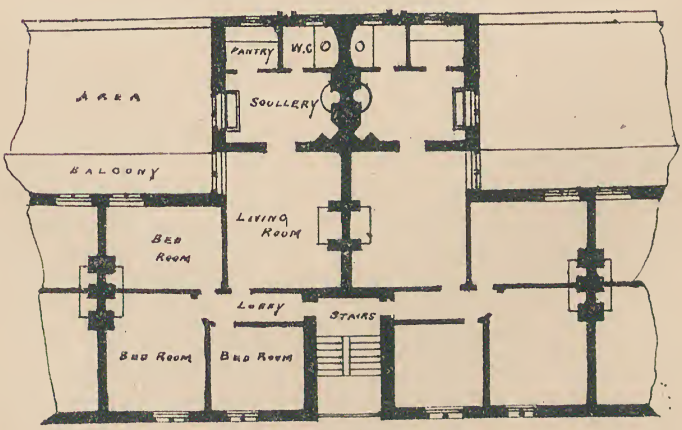
DWELLINGS FOR THE POOR OF LIVERPOOL



Dwellings Class No 1.

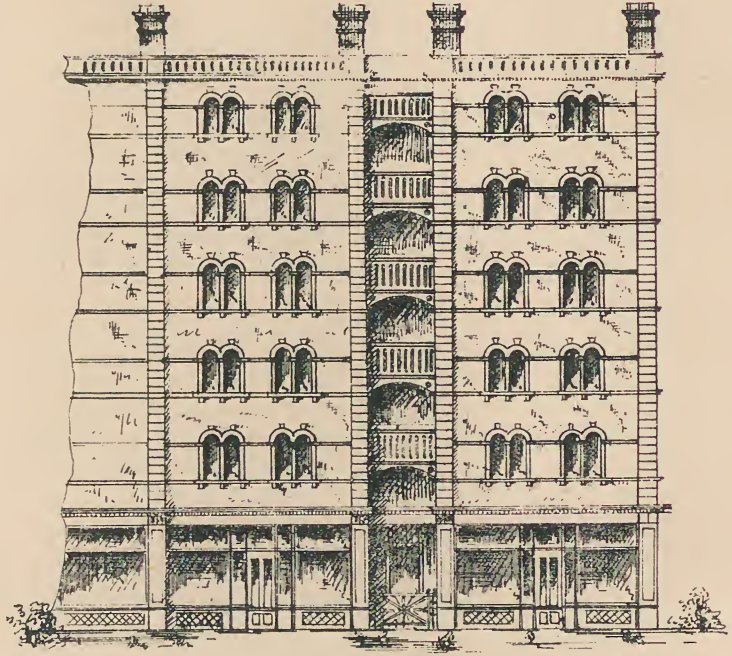


Dwellings Class No 2.



Dwellings Class No 3.

T. Pettitt & Co. Litho. Frith St. W.



Elevation of Dwellings for Poor of Liverpool

PLATE Nº 19.

1*s.* 7½d. per week, showing a nett return of 6⅞ths per cent. Convenient baths, wash-houses, and laundry buildings were arranged in the rear of the dwellings, the ground floors were intended to be occupied as shops, and the roofs of the buildings were designed for the purposes of drying yards. In these dwellings it was endeavoured to embrace all the improvements of the dwellings in London of a similar class, without their defects, and at a considerable less cost.

Appended is a Copy of the Borough Engineers' Analysis of Twelve of the Designs selected from those submitted:

No. of Design.	Name or Motto.	Estabished Cost.	Gross Rental.	Net Rental.	Interest Per Cent.
		£	£ *s.*	£ *s.*	£ *s.* *d.*
No. 64.....	John Birch..... ..	23,736	2,028 16	1,623 1	6 17 6
„ 52.....	Redman & Hesketh	17,797	1,289 12	1,031 14	5 16 0
„ 59.....	W. & R. Duckworth	17,292	1,146 12	917 6	5 6 0
„ 47.....	John Reeve	12,935	803 0	642 8	5 0 0
„ 38B ...	Pro Bono Publico...	16,778	1,019 4	815 7	4 17 2
„ 56.....	J. B.	18,420	1,076 8	861 3	4 13 6
„ 41C ...	G. E. Grayson.....	13,769	800 16	640 13	4 13 0
„ 32.....	W. G. Habershon...	22,984	1,248 0	998 8	4 7 0
„ 66.....	H.	19,854	1,055 12	844 10	4 5 0
„ 28D ...	W. L. Moffatt	14,108	707 12	566 2	4 0 0
„ 24.....	G. Thompson	18,993	850 12	680 10	3 11 7
„ 50&53	T. J. C. Crofts	24,483	984 0	787 4	3 4 0

Cubical Space contained in the Design, No. 64.

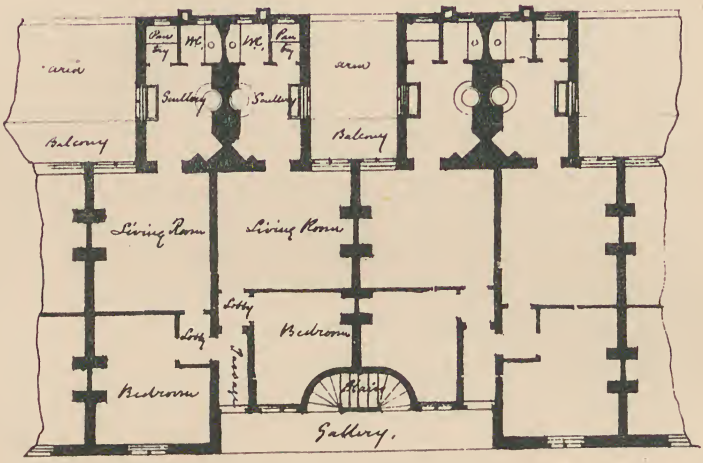
	Feet.
Class 1 :—	
Scullery, Pantry, &c.....	1056
Living room.....	1344
Bedroom No. 1.	960
Class 2 :—	
Scullery, Pantry, &c.	1152
Living room.....	1320
Bedroom No. 1.	1080
Bedroom No. 2.	846

CLASS 3 :—

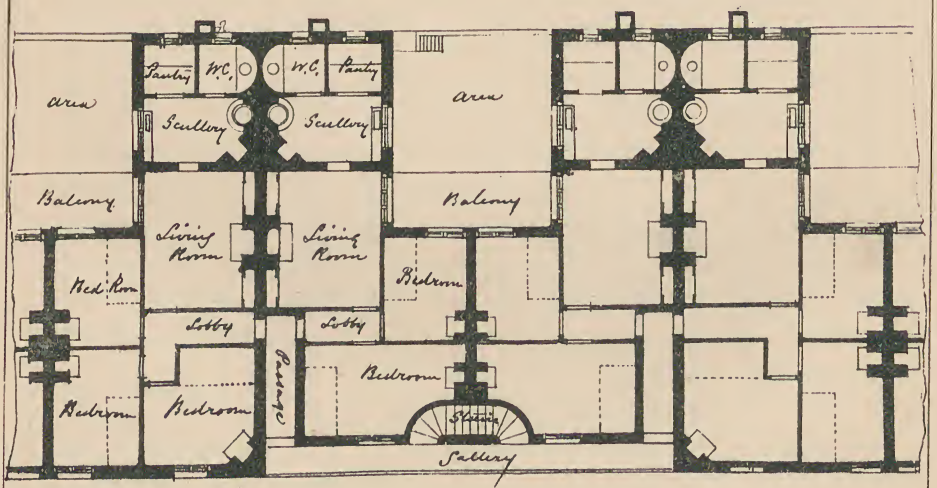
	Feet.
Scullery, Pantry, &c.....	896
Living room.....	1344
Bedroom No. 1.	1008
Ditto „ 2.	864
Ditto „ 3.	756

The arrangement of the party walls and chimney stacks in these dwellings offers great facility for the application of the system of warming and ventilating shewn and described in this pamphlet which would render them very healthy, and, in order to assist the ready escape of foul air, extraction flues could be formed adjoining the smoke flues in the chimney stacks, having openings and gratings connecting them with the several rooms. These foul air flues would be carried up to the top sufficiently high above roof, like a chimney head, for the escape of the foul air. To insure a direct current of air through each dwelling, from back to front, frames filled in with fine perforated zinc were intended to be placed over the living room and bedroom doors for this purpose. In the arrangement of these plans some attention was bestowed upon their sanitary efficiency, the water closets and soil drains were intended to have been constructed to prevent all possibility of effluvias escaping into the dwellings—each set of closets being provided with a shaft taken up a sufficient height above roof for the escape of all dangerous effluvia arising from stoppage of drains, inaction of syphons or traps. The water closets and pantries were thoroughly ventilated by a direct current. Off the W.C. in each dwelling a dust shaft is placed, communicating with a chamber in basement. These dust shafts are continued up to top of roof for the escape of unwholesome air arising from vegetable and other decomposed matter.

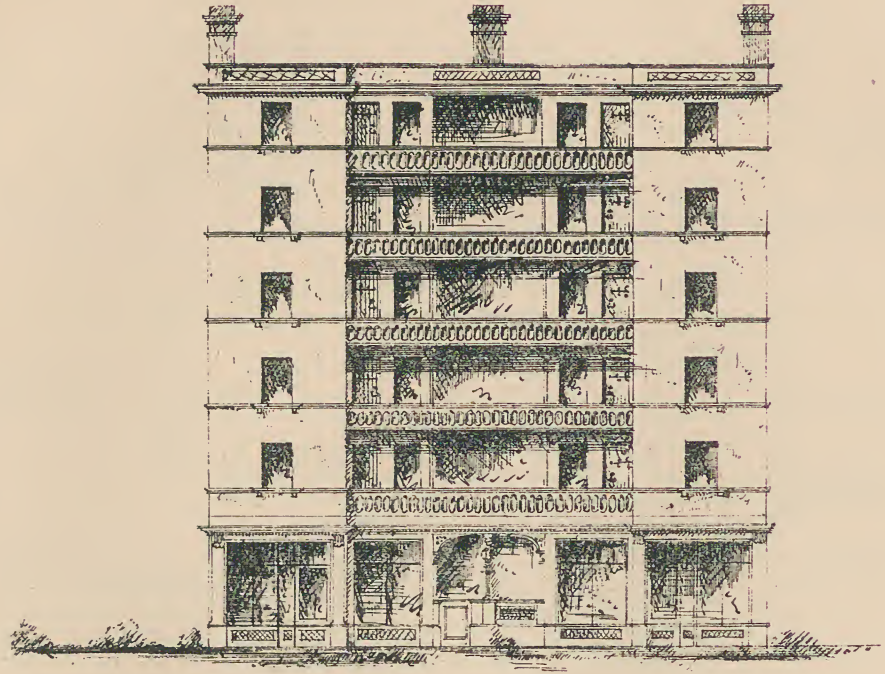
Each dwelling was intended to have a distinct water supply, with a cistern of sufficient size fixed in each scullery—the sculleries would have sinks, washing coppers and fireplaces, and would have been fitted with towel rollers, plate racks, and meat hooks. The living rooms were intended to have dwarf cupboards on each side of fireplaces, with bookshelving over them.



Dwellings Class 3,



Dwellings Class 1 & 2,



Elevation of Dwellings for Poor of Liverpool.

PLATE No 21.

Plates XX. & XXI.

THESE diagrams show some other plans which were submitted to the Corporation of Liverpool. They are arranged after the fashion of similar buildings erected in London within the last few years. In these plans it will be observed that one staircase serves as access to a double set of dwellings—two dwellings being arranged on each side thereof. There is, however, some lost space in galleries and passages, rendering these plans the more costly of the two designs. Sometime ago there appeared in a London paper some interesting accounts of the buildings belonging to the Industrial Dwellings Company and the dwellings of the Peabody Trust; the former, however, appears to be more of a successful speculation than a charity, the dwellings being mostly occupied by well-to-do artisans and others of a class who can afford to pay high rents—not the really poor. The Company profess to declare a return of 5 per cent. nett, but there is reason to believe considerable sums must be carried forward to the capital amount and invested in additional buildings. The dwellings of the Peabody Trust have been built solely for charitable purposes, and it is to be hoped that the next buildings they erect may be arranged with the least possible waste of space, and at a more economical cost than has hitherto been the case, in order to reduce the rents to within the means of the class of poor which these buildings were originally designed to accommodate. The accompanying letter, published in the "Times," of *January* 20, 1870, may perhaps be interesting in shewing the comparative cost, rent, &c., of these dwellings, and was written with the view to stimulate, if possible, the building of less expensive structures, with rentals more within the means of the poorer classes, for whose benefit these dwellings are much required:—

PLATE XXII.—*Group of Cottages erected in the village of Quatt, on the Dudmaston Estates, near Bridgnorth, Shropshire, for the* REV. F. H. WOLRYCHE WHITMORE.

A NUMBER of old cottages in the village of Quatt have been recently pulled down and replaced with blocks of new buildings, as shown by the annexed perspective view. The buildings have been arranged on the most improved principles with regard to health, comfort, and convenience. Each block contains three distinct dwellings, each dwelling having an entrance porch, staircase, living-room, scullery, pantry, coal and wood-house, and three upstairs bedrooms, excepting the centre dwellings, which have been arranged to meet the requirements of smaller families, and are provided with two upstairs bedrooms. Each cottage has a baking oven, washing copper, sink, pump, hard and soft water supply, and is thoroughly drained and ventilated, and provided with the usual fittings and conveniences to be found in all Mr. Birch's model dwellings. The method of warming and ventilating described in this pamphlet has been successfully applied to these buildings. All the internal walls have been built of brick and the external walls of red sandstone, raised on the estate, built in random coursed rubble work, and finished with dressings to doors and windows of a fine hard white stone, from the Alveley quarries. The roofs are covered with Staffordshire blue and red ornamental tiling, laid in bands and diamond patterns to special designs, with ornamental crested ridging, having projecting eaves and gables with bold barge boards, finished at apex of roof with turned and moulded

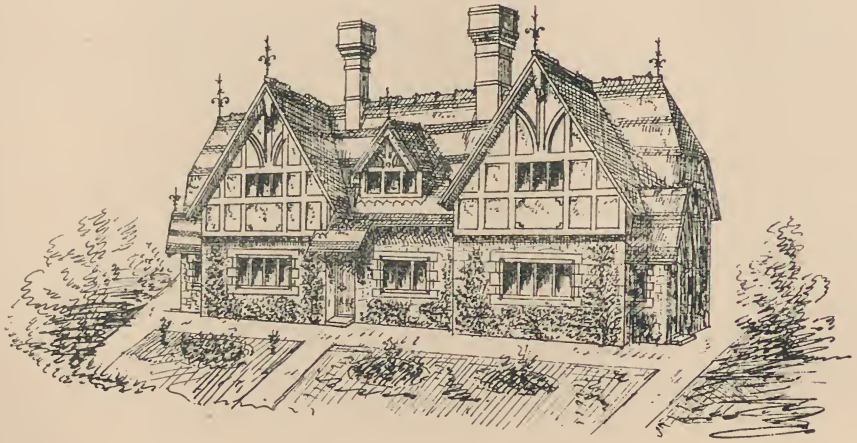


PLATE Nº 22.

pendants and iron finials of a gothic character. The front gables of each block of cottages are half timbered and plastered, and coloured between the timbers down to the chamber floor level, having a bold projection similar to some of the old cottages to be found in Cheshire, supported on a neat and simple timber corbel course. To ensure this half timbered work being thoroughly dry it is lined on the inside with a half brick wall, kept about three inches clear of the external half timbered portion. The centre cottages in each block have handsome, quaint, and ornamental dormer windows on the roofs, and the entrance porches, those to the centre dwellings being to the front, and the others, facing the ends, form features, having well pitched roofs and hoods, supported by projecting brackets resting on moulded stone corbels, producing a simple and rustic effect. In the chimney stacks of each block panel stones are fixed with initials and date carved thereon. The front of each block of cottages at line of roadway is finished with a dwarf wall of rubble stone to match the cottages, with stone pier at each end; on the dwarf wall is fixed a dwarf fence, formed of oak rails and posts with half larch poles on each side, fixed diagonally to form lattice work, with gates formed in the lattice work opposite the entrance to each cottage, hung to the oak posts with home-made iron hinges and drop-ring latches.

These blocks of cottages have been built under the inspection of the Inclosure Commissioners, at a cost (exclusive of the front fences) of about £500 per block, or £136 13*s.* 4*d.* per dwelling, an exceedingly moderate sum, considering the buildings have been erected in a thoroughly substantial and durable manner, and of an ornate character.

PLATE XXIII.—*Design for a single Cottage residence for manager of Brickfield, Savernake Estate, Wilts.*

THIS perspective view shows a design for a single cottage, intended for the use of the manager of one of the brick fields on the Savernake Estate, it would be equally suitable as a residence for a bailiff or under bailiff, a head keeper, gardener, or groom's residence. The cottage contains, on the ground floor, an entrance lobby and staircase, parlour, kitchen, pantry, scullery, coal and wood-house, and privy, with store closet under stairs, and three bedrooms on chamber plan of good dimensions. Each room is accessible from the entrance lobby and staircase, and not by means of going through one room into another.

The estimated cost of the cottage, built with hollow brick walls, and covered with tiles, with drainage, water supply, fixtures and fittings complete, and fit for occupation, is £250.

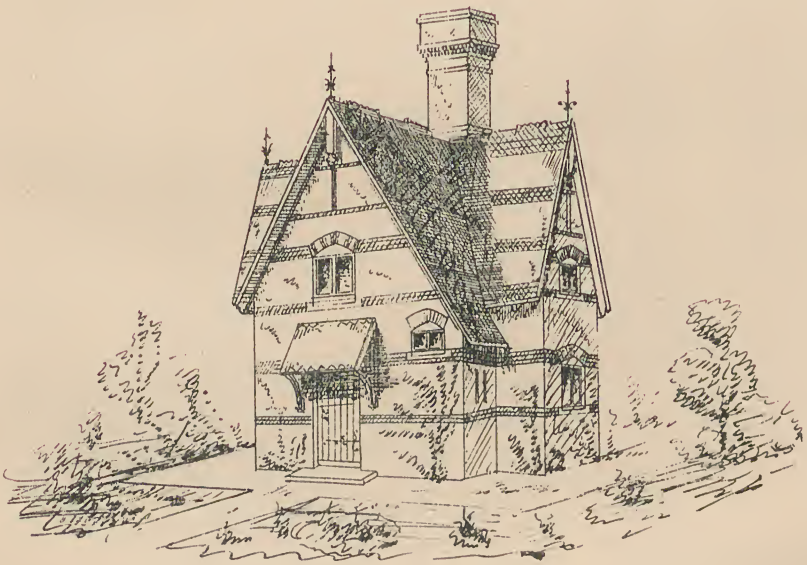


PLATE Nº 23.

COMPARISON OF COST, &c., FOR DWELLINGS OF THE POOR.

TO THE EDITOR OF THE TIMES.

"Sir,—There appeared in the columns of a contemporary, a short time back, an elaborate account of the Peabody Trustees' Dwellings and the buildings of the Improved Industrial Dwellings Company (Sir S. Waterlow's dwellings). Having had some little experience in providing dwellings of this class at a moderate cost, I venture to send you a comparative analysis of the accommodation, cost, rental, &c., of these buildings, the Society of Arts dwellings for the labouring classes, and plans prepared by me some time ago for dwellings of the poor of Liverpool. The latter, although not adopted, proved, upon examination by the borough engineer, to be the most economical from upwards of seventy designs.

"The buildings of the Improved Industrial Dwellings Company are six stories high, having in some cases basement dwellings, and appear to provide 653, distinct dwellings—294 with three rooms, scullery, &c., and 359 having two rooms, scullery, &c.—in all 1,600 rooms, exclusive of sculleries; the cost of the former being £162 3*s.* 11*d.*, and the latter £108 2*s.* 6¾*d.* per dwelling, or, at the rate of £54 1*s.* 3*d.* per room, showing a total expenditure of £86,503 for buildings. The average rent of the larger dwelling is 6*s.* 10*d.*, and of the smaller one 5*s.* 1½*d.* per week. The average rent for both dwellings is 6*s.* 1¾*d.*, and for each room 2*s.* 6*d.* per week. At these rates, when fully let, the gross rental would amount to £10,426 per annum, and the gross return 12 per cent.

"The Peabody Trustees' buildings, at Islington, Shadwell, and Spitalfields provide about 404 distinct dwellings, comprising one, two, and three rooms respectively, containing in all 891 rooms, at an average cost of £242 11*s.* per dwelling, or £113 16*s.* 3*d.* per room, the total cost amounting to £97,994 for buildings. The average rent of each dwelling is 3*s.* 11*d.*, and of each room 1*s.* 10*d.* per week; the gross rental when fully let would, therefore, be about £4,104 2*s.* per annum, and the gross return 4½ per cent.

"The plans for the dwellings of the poor of Liverpool, six stories high, without basement dwellings, contain 168 distinct dwellings, comprised in three classes—48 class I, with four rooms, scullery, &c.; 48 class II, with three rooms, scullery, &c.; and 72 class III, with two rooms, scullery, &c.; in all, 480 rooms, exclusive of sculleries: the cost of class I being £179 16*s.*; class II, £148 7*s.*; and class III, £98 18*s.* per dwelling: or at the rate of

£49 9*s.* per room, showing a total cost of £23,736 for buildings. The rent of the dwelling class I, is 6*s.* 6*d.*; class II, 4*s.* 10*d.*; and class III, 3*s.* 3*d.* per week: the average rent being about 4*s.*, and for each room 1*s.* 7½*d.* per week; the gross rental, if fully let, would amount to £2028 16*s.* per annum, showing a gross return of 8½ per cent.

"The Society of Arts' prize dwellings for labourers have been erected under my direction in upwards of nine counties: they are built semi-detached, each dwelling containing four rooms and scullery, with pantry, fuel-place, piggery, privy, cesspit, and ashpit, washing coppers, baking ovens, fixtures and fittings, wells, rainwater tank, drainage, &c., complete, their average cost has been £131 10*s.* per dwelling, or £32 17*s.* 6*d.* per room, exclusive of scullery. The average rent per dwelling is about 1*s.* 9*d.* per week, or 5¼*d.* per room per week, showing a gross rental of £4 11*s.* per annum, and a gross return of nearly 3½ per cent.

"From this statement it will be observed that the Society of Arts' dwellings are the cheapest, and, while containing one room more than the Company's largest dwellings, cost £31 13*s.* 11*d.* less Assuming the Company's larger dwelling to contain an equal amount of accommodation, the cost would then be about £216 per dwelling, built in tenements; whereas the Society of Arts' dwellings have cost but £131 10*s.*, built semi-detached; and although the former may perhaps be somewhat more substantially built than the latter, and a considerable difference exist between the cost of buildings in London and the country, yet it must be remembered that semi-detached buildings have to bear the whole cost of the structure complete, while tenement dwellings have to bear only a proportionate cost thereof.

"The Peabody Trustees' buildings are the most expensive, both per room and dwelling. This is doubtless accounted for by reason of the space lost in long corridors and passages. Had there been a greater number of staircases and no corridors or passages the cost would have borne a more favourable comparison. The Company's dwellings are not free from this objection, as there is considerable space lost in passages and open galleries on each floor. It will be seen that the plans for the Liverpool dwellings have a proper number of staircases, with the dwellings entering off the stair landings, thereby utilizing all available space and reducing the traffic of the stairs. The established cost of these buildings, whether calculated at per room or dwelling, is also much lower than the Company's or the Peabody Trustees' dwellings.

"With reference to the rentals, it will be seen that in the Company's largest dwellings, containing three rooms, scullery, &c., the working-man pays an average rent of 6*s.* 10*d.* per week, whereas in the Society of Arts' dwellings, containing four rooms and scullery, &c., the labourer pays but 1*s.* 9*d.* per week. The working-man in London would, therefore, seem to pay four times as much rent for a smaller dwelling compared with that of a labourer in the country.

"To enable the working-man with a family to pay such a high rent, one of the rooms is not unfrequently let to a lodger, a privilege I believe permitted

in certain of the Company's dwellings; and as the largest of these contain but a limited extent of sleeping room, this can hardly be done having proper regard to decency. The rates fixed by the Peabody Trustees and the rating of the Liverpool plans appear to be moderate, and within the limits of a working-man's means, providing for a proper number of sleeping apartments essentially necessary to all dwellings.

"Trusting you will have the goodness to insert this letter I have the honour to be, Sir, your most obedient servant,

"JOHN BIRCH."

JANUARY 20TH, 1870.

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